

CLAIMS

What is claimed is:

1. A broadcast receiver comprising:
  - a. a power supply having a power-supply output terminal; and
  - b. a broadcast interface circuit including:
    - i. an interface-circuit input terminal adapted to receive a plurality of broadcast communications signals on the tuner input terminal, each signal modulated about a selected carrier frequency;
    - ii. a tuner having a tuner input terminal connected to the interface input terminal, wherein the tuner is adapted to select one of the signals and provide the selected signal on a tuner output terminal;
    - iii. a wake-up sensor having a sensor input terminal connected to the interface input terminal and a wake-up-sensor output terminal, the wake-up sensor being adapted to produce a wake-up signal on the wake-up-sensor output terminal in response to first selected signal; and
    - iv. a wake-up switch having a wake-up-switch input terminal connected to the power-supply output terminal, a wake-up-switch output terminal, and a wake-up-switch control terminal connected to the wake-up-sensor output terminal.

2. The receiver of claim 1, the wake-up sensor further including a second tuner tuned to a carrier frequency associated with the first selected signal.
3. The receiver of claim 2, the wake-up sensor further comprising a digitizer connected between the tuner and the wake-up-switch control terminal.
4. The receiver of claim 1, wherein the tuner includes a power terminal connected to the wake-up-switch output terminal.
5. The receiver of claim 1, further comprising a display capable of indicating a power-on condition for the receiver, the display having a power-input terminal connected to the power supply via a second switch.
6. The receiver of claim 5, wherein the display does not indicate a power-on condition in response to the wake-up signal.
7. The receiver of claim 1, further comprising a processor having a processor power terminal connected to the wake-up-switch output terminal.
8. A broadcast communication network comprising:
  - a. a broadcast head-end adapted to broadcast a plurality of signals about a corresponding plurality of carrier frequencies, the signals including an occasional wake-up instruction;
  - b. a plurality of receivers adapted to receive the plurality of signals, each receiver including:

- i. a power supply having a power-supply output terminal; and
- ii. a broadcast interface circuit including:
  - (1) an interface-circuit input terminal adapted to receive a plurality of broadcast communications signals on the tuner input terminal, each signal modulated about a selected carrier frequency;
  - (2) a wake-up sensor having a sensor input terminal connected to the interface input terminal and a wake-up-sensor output terminal, the wake-up sensor being adapted to produce a wake-up signal on the wake-up-sensor output terminal in response to first selected signal; and
  - (3) a wake-up switch having a wake-up-switch input terminal connected to the power-supply output terminal, a wake-up-switch output terminal, and a wake-up-switch control terminal connected to the wake-up-sensor output terminal.

9. The network of claim 8, the wake-up sensor further including a tuner tuned to a carrier frequency associated with the first selected signal.

10. The network of claim 9, the wake-up sensor further comprising a digitizer connected between the tuner and the wake-up-switch control terminal.

11. The network of claim 9, the interface circuit including a second tuner having a tuner input terminal connected to the interface input terminal, wherein the second tuner is adapted to select one of the signals and provide the selected signal on a tuner output terminal.
12. The network of claim 11, further comprising a processor, the interface circuit further comprising a digitizer connected between the tuner and the processor.
13. The network of claim 11, wherein the second tuner includes a power terminal connected to the wake-up-switch output terminal.
14. The network of claim 8, further comprising, for each receiver, a display capable of indicating a power-on condition for the receiver, the display having a power-input terminal connected to the power supply via a second switch.
15. The network of claim 14, wherein the display does not indicate a power-on condition in response to the wake-up instruction.
16. A method of reducing power usage in a broadcast receiver, the method comprising:
  - a. monitoring, in a standby mode, a user-input device for a power-on instruction;
  - b. indicating a power-on condition for the receiver in response to the power-on instruction;

- c. monitoring the user-input device for a power-off instruction;
- d. indicating a standby condition for the receiver in response to the power-off instruction; and
- e. monitoring, with the receiver in the standby condition, a broadcast communication channel for a wake-up instruction.

17. The method of claim 16, further comprising, upon receipt of the wake-up instruction, providing power to a first portion of the receiver and indicating a standby condition for the receiver while receiving a receiver update.

18. The method of claim 17, further comprising, upon receipt of a power-on instruction in the standby condition, providing power to the first portion and a second portion of the receiver and indicating the power-on condition.

19. The method of claim 16, wherein indicating a power-on condition includes providing a video signal to a video display device.

20. The method of claim 16, wherein the user-input device comprises an infrared receiver.

21. A broadcast receiver comprising:

- a. means for monitoring a user-input device for a power-on instruction;

- b. display means for indicating a power-on condition for the receiver in response to the power-on instruction;
- c. means for monitoring the user-input device for a power-off instruction;
- d. means responsive to the power-off instruction for indicating a power-off condition for the receiver; and
- e. means for monitoring a broadcast communication channel for a wake-up instruction with the receiver in the power-off condition.

22. The receiver of claim 21, wherein the means for monitoring the broadcast communication channel includes a power switch for providing power to a processor in response to the wake-up instruction.

23. The receiver of claim 22, wherein the display means indicates the power-off condition when the power switch provides power to the processor in response to the wake-up instruction.